

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (Currently Amended) A method of estimating ~~the~~an optimum service capacity at a specified quality of service (QoS) for ~~the~~ transmission of packets of data traffic of different characteristics, the traffic being described by a predetermined type of a descriptor (~~D~~) to allow ~~the~~ calculation of ~~the~~an estimated bandwidth requirement (BWR) for that traffic, through a switch node ~~comprising~~having a buffer ~~having with~~a defined size (~~b~~), the method comprising at time intervals, carrying out the steps of:

- (a)——configuring ~~the~~a service-capacity;
- (~~b~~)——sampling the traffic;
- (~~c~~)——extracting the descriptor (~~D~~);
- (~~d~~)——calculating from the descriptor (~~D~~) the BWR for the configured service capacity;
- (~~e~~)——using the calculated BWR to configure a new service capacity ;
- (~~f~~)——iteratively carrying out ~~steps (b) through (e)~~the sampling, the extracting, the calculating and the using until the calculated BWR and the configured service capacity coincide to provide a final service capacity; and
- (~~g~~)——defining ~~this~~the final service capacity as ~~the~~an optimum service capacity for ~~that~~the traffic at ~~that~~the buffer.

2. (Currently Amended) A method as claimed in claim 1, ~~in which~~wherein the configuring comprises initially configuring the service capacity specified in step (a) is to match ~~at~~ the previous optimum service capacity.

3. (Currently Amended) A method as claimed in claim 1 ~~or 2, in which~~wherein the sampling comprises the traffic is continuously monitored ~~monitoring the traffic~~ so that if ~~the~~a nature of the traffic changes, a new optimum service capacity is calculated.

4. (Currently Amended) A method as claimed in ~~any preceding claim 1~~, wherein the defining comprises calculating a new optimum service capacity and resetting a target QoS ~~in which when the required target specified QoS changes from the target QoS initially set, the target QoS is reset and a new optimum service capacity is calculated.~~

5. (Currently Amended) A method as claimed in ~~any preceding claim 1~~, ~~in which step (a) wherein the configuring is carried out within the jurisdiction and some or all of steps (b) to (g) the sampling, the extracting, the calculating, the using, the iteratively carrying, and the defining are carried out outside the jurisdiction and the method further comprises using the optimum service capacity to control the transmission of the traffic through the switch node.~~

6. (Currently Amended) A method as claimed in ~~any of claims claim 1 to 4~~, ~~in which wherein the configuring comprises receiving a sample of the traffic is received with step (a) being carried from~~ outside the jurisdiction and in which at least the extracting, the calculating, the using, the iteratively carrying, and the defining ~~steps (c) to (g) are carried out within the jurisdiction.~~

7. (Currently Amended) A method as claimed in ~~any of claims claim 1 to 4~~, ~~in which wherein~~ the switch node is remotely located with respect to where the method is carried out, except for the downloading of data to and from the switch node.

8. (Currently Amended) A closed loop control system having an interconnected communications network, comprising: ~~a communications network in which are interconnected:~~

user end systems for the delivery and reception of data;

a switch node incorporating at least one buffer;

means to configure a service rate; and

a programmable controller having means to carry out the method of estimating the optimum service capacity in accordance with of any preceding claim 1.

9. (Currently Amended) A closed loop control system as claimed in claim 8, in which the controller is directly connected to a specific end user output source ~~for the transmission of~~ to transmit data to the switch node.

10. (Currently Amended) A computer program comprising program instructions for causing a computer to perform the method of ~~claims~~ claim 1 ~~to 7 inclusive~~.

11. (Currently Amended) A computer program comprising program instructions for causing a computer to provide the means of ~~claims~~ claim 8 ~~or 9~~.

12. (Currently Amended) A computer program as claimed in claim 10 ~~or 11~~ embodied on a record medium.

13. (Currently Amended) A computer program as claimed in claim 10 ~~or 11~~, embodied in a computer memory.

14. (Currently Amended) A computer program as claimed in claim 10 ~~or 11~~, embodied in a read-only memory.

15. (Currently Amended) A computer program as claimed in claim 10 ~~or 11~~, carried on an electrical carrier signal.

16. (New) A computer program as claimed in claim 11 embodied on a record medium.

17. (New) A computer program as claimed in claim 11, embodied in a computer memory.

18. (New) A computer program as claimed in claim 11, embodied in a read-only memory.

19. (New) A computer program as claimed in claim 11, carried on an electrical carrier.